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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application of:

LAMB, JAMES E., III et al.

Serial No.: 10/759,447

Filed: January 16, 2004

IMPROVED FILL MATERIAL FOR DUAL
DAMASCENE PROCESSES

Docket No.: 27269-CNT7

Confirmation No.: 7841

Group Art Unit No.: 2812

Examiner: Ha T. Nguyen\

TRANSMITTAL

Transmitted herewith are: Transmittal, Statement regarding Disclosure of Related Pending Application(s); a copy of an Office Action mailed May 17, 2004; and return postcard.

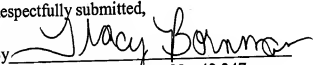
EL 973754474 US

Express Mail No.

Date: August 9, 2004

Respectfully submitted,

By


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ATTORNEYS FOR APPLICANT(S)



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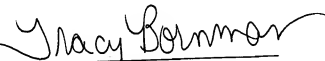
Assistant Commissioner of Patents
PO Box 1450
Alexandria, VA 22313-1450

Sir:

STATEMENT

In accordance with Applicants' duty of candor toward the Office, Applicants hereby advise the Examiner of the existence of U.S. Patent Application 10/643,398, filed August 19, 2003, entitled **CROSSLINKABLE FILL COMPOSITIONS FOR UNIFORMLY PROTECTING VIA AND CONTACT HOLES**. An office action was mailed in the '398 application on May 17, 2004, in which several claims were rejected as being anticipated by or obvious in view of one or more references. A copy of that action is enclosed.

Respectfully submitted,

By 
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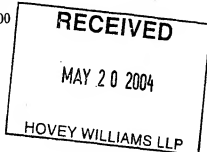
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UNITED STATES DEPARTMENT OF COMMERCE
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Alexandria, Virginia 22313-1450
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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/643,398	08/19/2003	James E. Lamb III	27269-CNT6	3983

23589 7590 05/17/2004

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KANSAS CITY, MO 64108



EXAMINER

EGWIM, KELECHI CHIDI

ART UNIT PAPER NUMBER

1713

DATE MAILED: 05/17/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

ALECTO
MAY 20 2004
ENTERED BY *Agar*



Office Action Summary

Application No.

10/643,398

Applicant(s)

LAMB ET AL.

Examiner

Dr. Kelech C. Egwin

Art Unit

1713

- The MAILING DATE of this communication appears on the cover sheet with the correspondence address -

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 August 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☒ Claim(s) 1 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4.

- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other:



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DETAILED ACTION

Specification

1. Applicant must update the reference to the parent application(s) in the first sentence of the specification to include the current status of all nonprovisional parent applications.

Claim Objections

2. Claim 1 is objected to under 37CFR 1.75 as being in improper form because it sets forth a plurality of compositional elements, without each element of the claim being separated by a line indentation. See MPEP § 608.01(m).

Appropriate correction is required.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

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Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-6 and 8-16 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, 35 U.S.C. 103(a) as being unpatentable over Das et al. (USPN 5602198).

In col. 2, lines 3-8 and 44-50, col. 4, lines 1- 34, and col. 7, lines 14-19, Das et al. teach etch resistant coating compositions comprising:

- (i) an acrylic polymer binder,
- (ii) an aminoplast crosslinking agent,
- (iii) a solvent system including ethers and/or alcohols,
- (iv) an organic pigment (dye), and
- (v) a surfactant.

In col. 3, lines 21-24, Das et al. further teach the acrylic polymer to have a molecular weight of from about 1000 to 30,000.

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6. Claims 1-3 and 5-15 are rejected under 35 U.S.C. 102(e) as anticipated by or, in the alternative, 35 U.S.C. 103(a) as being unpatentable over Scopazzi et al. (USPN 5859136).

In col. 3, lines 31-42, col. 9, lines 43-57, and col. 14, lines 1-40, Scopazzi et al. teach coating compositions, comprising:

- (i) an acrylic polymer binder,
- (ii) an isocyanate crosslinking agent,
- (iii) a solvent system including PGME, and
- (iv) an organic pigment.

Further, in col. 8, lines 15-22, Scopazzi et al. teach the coatings to have improved etch performance.

7. Claims 1-15 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, 35 U.S.C. 103(a) as being unpatentable over Victorius (USPN 4451597).

In column 2, lines 34-55, column 7, lines 27-35, and column 11, lines 1-8.

Victorius teaches coating compositions, comprising:

- (i) an acrylic polymer binder,
- (ii) a melamine/formaldehyde crosslinking agent,
- (iii) a solvent system including PGME, and
- (iv) an organic pigment.

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In col. 4, lines 20-24, Victorius teaches the acrylic polymer to have a molecular weight of from about 2500 to 25,000.

8. Claims 1-6 and 8-15 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, 35 U.S.C. 103(a) as being unpatentable over Vasta (USPN 4451597).

In column 2, lines 19-35, column 5, lines 9-37, column 6, lines 17-26, and column 9, lines 31-52, Vasta, teaches coating compositions, comprising:

- (i) an acrylic polymer binder,
- (ii) an epoxide crosslinking compound,
- (iii) a solvent system including ethers and/or alcohols, and
- (iv) an organic pigment.

In col. 3, lines 40-44, Vasta teaches the acrylic polymer to have a molecular weight of from about 1000 to 50,000.

9. Claims 1-3, 5, 6, and 8-16 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, 35 U.S.C. 103(a) as being unpatentable over Felter et al. (USPN 4981891).

In column 2, lines 45-67, column 4, lines 49-59, and column 6, lines 6-56, Felter et al. teach coating compositions, comprising:

- (i) an acrylic polymer binder,
- (ii) a carboiimide crosslinking agent,

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- (iii) a solvent system including ethers and/or alcohols,
- (iv) an organic pigment, and
- (v) a surfactant.

While Das et al., Scopazzi et al., Victorius, Vasta, or Felter et al., above, do not expressly teach the disclosed properties of the claimed coating composition, it is still reasonable that the coating compositions of Das et al., Scopazzi et al., Victorius, Vasta, or Felter et al., would possess the presently claimed properties since the compositions of Das et al., Scopazzi et al., Victorius, Vasta, or Felter et al. are essentially the same as the claimed composition and the USPTO does not have at its disposal the tools or facilities deemed necessary to make physical determinations of the sort. In any event, an otherwise old composition is not patentable regardless of any new or unexpected properties. In re Fitzgerald et al , 619 F.2d 67, 205 USPQ 594 (CCPA 1980). See MPEP § 2112 - § 2112.02.

Even if assuming that the prior art references do not meet the requirements of 35 U.S.C. 102, it would still have been obvious to one of ordinary skill in the art, at the time the invention was made, to arrive at the same inventive composition because the disclosure of the inventive subject matter appears within the generic disclosure of the prior art.

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10. Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Das et al. as applied to claims 1-6 and 8-16 above, or Felter et al. as applied to claims 1-3, 5, 6, 8-16 above, and further in view of Song (USPN 4834799).

Das et al. or Felter et al., above, differ from the claimed invention in that, the surfactant is not disclosed as being a fluorinated surfactant. However, it is known in the art to use a fluorinated surfactant as a species of the genus "surfactant" in the polymeric compositions of Das et al. or Felter et al., such as taught by Song. (See col. 4, lines 8-14)

In col. 4, lines 8-14 and claim 19, Song teaches a polymeric composition comprising an acrylic polymer, a dye, and glycol ether and a fluorinated surfactant.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use a fluorinated surfactant as a surfactant in the polymeric compositions of Das et al. or Felter et al. because 1) Das et al. or Felter et al. teach a surfactant, 2) Song teaches a fluorinated surfactant as a species of surfactant, and 3) one having ordinary skill in the art, at the time the invention was made, would have been motivated by a reasonable expectation of success to use a fluorinated surfactant as a surfactant in the polymeric compositions of Das et al. or Felter et al.

Further more, the applicant has failed to point out the criticality of a fluorinated surfactant in the embodiment of this invention. The applicant has not shown unexpected results from fluorinated surfactants.

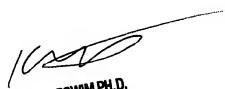
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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dr. Kelechi C. Egwim whose telephone number is 272-1099. The examiner can normally be reached on M-T (7:30-6:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu can be reached on (703) 308-2450. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

KCE


KELECHI C. EGWIM PH.D.
PRIMARY EXAMINER

Sheet 1 of 1FORM PTO-1449
(Rev. 2-32)U.S. DEPARTMENT OF COMMERCE
PATENT AND TRADEMARK OFFICEATTY. DOCKET NO.
27269-CNT6SERIAL NO.
10/643,398OIPE JCF 13
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PATENT & TRADEMARK OFFICEINFORMATION DISCLOSURE
STATEMENT BY APPLICANT

(Use several sheets if necessary)

APPLICANT: LAMB, JAMES E. III et al.

FILING DATE:
07/15/2002

GROUP: 1713

U.S. PATENT DOCUMENTS

EXAM. INITIAL	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
KCE	8 0 5 4 2 8 8	04/25/2000	Sato et al.			
	8 0 5 5 5 8 3	05/09/2000	Jin et al.			
	6 3 2 5 1 6 8	12/11/2001	Hussein et al.			
	8 2 8 5 3 0 3	07/01/2001	Lu et al.			
	8 8 5 1 7 1 7	10/08/2002	Rutter, Jr. et al.			
	8 3 2 9 1 1 8	12/11/2001	Hussein et al.			
	5 2 8 3 1 0 4	02/01/1994	Aoude et al.			
	8 5 6 9 3 7	01/21/1997	Mikagi			
	5 9 8 9 6 2 8	11/23/1999	Chen et al.			
	8 1 0 0 1 9 0	08/08/2000	Kobori			
	8 1 1 7 7 6 1	09/12/2000	Lukane et al.			
	8 1 6 5 8 9 9	12/26/2000	Matumoto			
	8 1 4 0 2 2 6	10/31/2000	Grill et al.			
	8 0 1 0 6 5 6	01/04/2000	Takijuchi et al.			
	8 8 0 2 1 9 8	02/11/1997	Das et al.			
	8 8 6 5 0 5 2	05/12/1987	Cservak et al.			
	4 9 9 1 8 9 1	01/01/1991	Felter et al.			
	6 2 0 4 1 6 6	03/20/2001	McTeer			
	6 1 0 3 4 5 6	08/15/2000	Többen et al.			
	5 8 5 9 1 3 6	01/12/1999	Scopazzi et al.			
	4 4 5 1 5 9 7	05/29/1984	Victorius			
KCE	4 7 2 7 1 0 0	02/23/1988	Vasta			

FOREIGN PATENT DOCUMENTS

	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION	
						YES	NO
KCE	0 5 2 7 4 4 4	02/05/1993	Japan			yes	
	0 8 1 0 7 7 6 7	04/30/1993	Japan			yes	
	6 3 1 5 5 0 4 4	05/28/1988	Japan				no
	0 1 2 2 5 3 1 8	09/08/1989	Japan				no
KCE	6 1 0 7 0 7 2 0	04/11/1986	Japan				no

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

KCE

5/11/04

AVAILABLE COPY



Notice of References Cited

Application/Control No.

10/643,398

Applicant(s)/Patent Under
Reexamination
LAMB ET AL.

Examiner

Dr. Kelechi C. Egwim

Art Unit

1713

Page 1 of 1

U.S. PATENT DOCUMENTS

*		DOCUMENT NO.	DATE	NAME	CLASS	SUBCLASS	DOCUMENT SOURCE **	
							APS	OTHER
<input checked="" type="checkbox"/>	A	5602198	Feb. 1997	Das et al.	524	509	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	B	5859136	Jan. 1999	Scopazzi et al.	525	123	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	C	4451597	May. 1984	Victorius	524	37	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	D	4727100	Feb. 1988	Vasta	524	40	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	E	4981891	Jan. 1991	Felter et al.	524	247	<input type="checkbox"/>	<input type="checkbox"/>
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NON-PATENT DOCUMENTS

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<input type="checkbox"/>	X		<input type="checkbox"/>	<input type="checkbox"/>

*A copy of this reference is not being furnished with this Office action. (See Manual of Patent Examining Procedure, Section 707.05(a).)
**APS encompasses any electronic search i.e. text, image, and Commercial Databases.

U.S. Patent and Trademark Office
PTO-892 (Rev. 03-98)

Notice of References Cited

Part of Paper No. 0512